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Induction of Fertile Estrus in Early Weaned Ewes with Controlled Light

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INDUCTION OF FERTILE ESTRUS IN EARLY WEANED EWES WITH CONTROLLED LIGHT
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Summary

This experiment was designed to evaluate the effect of controlled lighting, 8L:16D, on inducing fertile cyclic behavior in postpartum ewes. Ten Targhee ewes 45 to 60 days postpartum were weaned February 2, 1982, placed with a ram and subjected to the light treatment for 38 days. Eight of the ten ewes were pregnant when tested 60 days following treatment.

Introduction

In order to achieve more than one lamb crop per year, it is necessary to breed ewes during lactation or following a relatively short lactation. Many times this means conception must occur during the time when ewes are normally going into anestrus or are in anestrus. This preliminary study was conducted to evaluate breeding response of ewes subjected to controlled light following weaning at 45 to 60 days postpartum.

Experimental Procedure

Lambs were weaned 45 to 60 days postpartum from ten aged Targhee ewes on February 2, 1982. The ewes were then subjected to 8 hours light and 16 hours dark (8L:16D) per day in a controlled environmental room for 38 days. During this time, they were continuously exposed to a Suffolk ram that had previously been semen tested. Each ewe was fed 2 lb of alfalfa pellets per day for the first week following weaning. This was increased to 3 lb of alfalfa pellets and .75 lb of corn per day for the remainder of the experiment.

Results and Discussion

Sixty days after completion of the light control phase of the experiment, the ewes were tested for pregnancy with an ultrasonic pregnancy tester. Eight of the ten ewes were diagnosed as pregnant. Seven of these ewes subsequently lambed from June 29 to July 23, 1982, and the eighth one aborted a single fetus on June 2, 1982. The lambing rate per ewe lambing was 1.4.

These results indicate a favorable breeding response following early weaning and a reduction of light exposure. Additional work is needed to determine if this response is due to the cessation of lactation or the reduction of light per day or if the combination is necessary.

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